

# COMMON-DATA

<b>File</b>	33
<b>Op-Sys</b>	OS/390, VSE/ESA, BS2000/OSD
<b>Statement</b>	FIND / PROCESS
<b>Task</b>	Share memory between multiple applications. This memory is accessed by a unique name and is split up into data slots. When this view is to be used, the startup parameter CDATALEN must have a value of greater than 0 (zero).

## Common Fields for all Operating Systems

Dictionary Field Name	F/L	Mu	DE	Remarks
ERROR-CODE	N3			
ERROR-TEXT	A58			
NODE	N5		D	
NODE-NAME	A16		D	
SYSTEM-MESSAGE-CODE	A10			
DATA-ID	A12		D	Required for all functions except LIST.
NUMBER-OF-ENTRIES	N5		D	Relevant for functions CREATE and LIST.
ENTRY-LENGTH	N3		D	Relevant for functions CREATE and LIST.
ENTRY-NUMBER	N5		D	Relevant for functions MODIFY and GET.
DATA	A250		D	Relevant for functions MODIFY and GET.
CURRENT-ENTRIES	N5		D	Relevant for functions MODIFY, GET, LIST, CLOSE.
DELETE-ENTRY	A3		D	Relevant for function MODIFY.
PROTECT	A8		D	
FUNCTION	A8		D	Required field.

## Additional Fields Supported for BS2000/OSD

Dictionary Field Name	F/L	Mu	DE	Remarks
SYSTEM-CODE	B2			

## Relevant Error Codes

Code	Text	OS/390	VSE/ESA	BS2000/OSD
600	Unknown function.	X	X	X
621	Identifier missing / duplicate / not found.	X	X	X
622	NUMBER-OF-ENTRIES missing or invalid.	X	X	X
623	ENTRY-LENGTH missing or invalid.	X	X	X
624	ENTRY-NUMBER missing or invalid.	X	X	X
625	Cannot allocate area.	X	X	X
626	DATA missing.	X	X	X
627	Field position + length > 250.	X	X	X
629	Area is protected.	X	X	X
746	Serialization running in error.	X	X	X

## Field Descriptions

Field Name	Type/Length	Operating System
CURRENT-ENTRIES	(N5)	OS/390, VSE/ESA, BS2000/OSD

Output field. The value of CURRENT-ENTRIES is set from the functions CLOSE, MODIFY, GET and LIST.

Field Name	Type/Length	Operating System
DATA	(A250)	OS/390, VSE/ESA, BS2000/OSD

Relevant for the functions MODIFY and GET. The contents of the entry.

Function MODIFY is expecting the input record in DATA.

Function GET provides the contents of the record in output field DATA.

Field Name	Type/Length	Operating System
DATA-ID	(A12)	OS/390, VSE/ESA, BS2000/OSD

DATA-ID identifies the name associated with an area of records in the COMMON-DATA. Required as input field in all functions except LIST.

Function LIST returns all existing DATA-ID's.

Field Name	Type/Length	Operating System
DELETE-ENTRY	(A3)	OS/390, VSE/ESA, BS2000/OSD

Only used in the function MODIFY as input field.

Functions MODIFY and DELETE-ENTRY='YES' are used to remove the requested record identified by ENTRY-NUMBER.

Field Name	Type/Length	Operating System
ENTRY-LENGTH	(N3)	OS/390, VSE/ESA, BS2000/OSD

The length of each entry in the area. Required input field in the function CREATE. Used as output field in functions CLOSE, MODIFY, GET, LIST.

Field Name	Type/Length	Operating System
ENTRY-NUMBER	(N5)	OS/390, VSE/ESA, BS2000/OSD

Relevant for functions MODIFY and GET.

ENTRY-NUMBER is required as input field if the function MODIFY and DELETE-ENTRY='YES' is used. Otherwise it is not required and is determined implicitly.

The example program below exploits this feature. ENTRY-NUMBER is omitted for the function MODIFY to write all data records and for function GET to read all data records.

Field Name	Type/Length	Operating System
FUNCTION	(A8)	OS/390, VSE/ESA, BS2000/OSD

Function to be performed. Possible options:

Option	Explanation
CLOSE	Free unused space in a given area.
CREATE	Create a new area identified by DATA-ID with size (NUMBER-OF- ENTRIES * ENTRY-LENGTH).
DELETE	Delete area identified by DATA-ID.
GET	Get record from given area.
LIST	Generate list of active areas.
MODIFY	Add, modify or delete a record in a given area.

Field Name	Type/Length	Operating System
NUMBER-OF-ENTRIES	(N5)	OS/390, VSE/ESA, BS2000/OSD

The maximum number of entries in the area. Required as input field in function CREATE. Used as output field in functions CLOSE, MODIFY, GET, LIST.

Field Name	Type/Length	Operating System
PROTECT	(A8)	OS/390, VSE/ESA, BS2000/OSD

Field used to set or display protection attributes of an area in COMMON-DATA.

It is an input field when function CREATE is requested. It is an output field to display protection attributes via function LIST. If protection is omitted, all users are permitted to issue all functions to that area.

The following options are available to restrict the use of an area for other users:

Option	Explanation
DELETE	Area is DELETE protected. The functions GET, LIST and MODIFY are permitted. Other users can read and modify area but cannot delete it.
MODIFY	Area is MODIFY protected. Functions GET and LIST are permitted. Other users can issue function GET to read that area. It is not possible to modify and to delete it.
READ	Area is READ protected. Other users cannot issue any function except LIST. It is not possible to read, modify and delete that area.

## Example

The following example illustrates the usage of the different COMMON-DATA functions.

It consists of the following steps:

- list existing COMMON-DATA areas and status information FUNCTION='LIST'
- create an area in the COMMON-DATA pool FUNCTION='CREATE'
- write 5 records into the area FUNCTION='MODIFY'
- remove the third record FUNCTION='MODIFY'
- compress the area to the used size of 4 records FUNCTION='CLOSE'
- list the area and status information FUNCTION='LIST'
- display the contents of the records in the area FUNCTION='GET'
- remove the area and all records FUNCTION='DELETE'

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Output from above sample program:

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! COMMON-DATA LIST Overview before starting our example !

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Common-Data-Area	Number of Entries	Current Entries	Length of Entry
TEST-BOX	7	0	250
CONTAINER	20	0	50

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+-----+

! Status of our area in COMMON-DATA !

+-----+

Common-Data-Area	Number of Entries	Current Entries	Length of Entry
MSGBOX1	4	4	100

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+-----+

! Contents of our area in COMMON-DATA !

+-----+

Entry-number Data

1	Message number 1
2	Message number 2
3	Message number 4
4	Message number 5

Five records have been written to the area MSGBOX1. After removing the third record and compressing the area, four records are available containing the messages 1, 2, 4, 5.

## Supplementary Information about COMMON-DATA

### What does COMMON-DATA do?

COMMON-DATA allows you to establish areas to save data records with a fixed record length. These records can be accessed from different applications. The usage is determined by the applications only, e.g. when to create and to destroy data records. It is a service for an effective data exchange. The areas are labeled with unique names provided in field DATA-ID.

### Which NATURAL statements must be used with the various FUNCTIONS?

The functions LIST and GET should be requested with a FIND statement. All other functions (CLOSE, CREATE, DELETE, MODIFY) are designed as single requests and should be performed with a PROCESS statement.

## **How does writing to COMMON-DATA work?**

The function MODIFY is used to write records into the data area. The records will be saved in sequential order. The ENTRY-NUMBER can be omitted for writing records with the function MODIFY. The creation of the COMMON-DATA records with explicitly defined entry numbers requires an ascending sequential order. For example, it is not possible to write a record with Entry Number 3 if only Entry Number 1 has been written already.